DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON DC 20350-2000

IN REPLY REFER TO

OPNAVINST 2000.31
OP-941C
10 APR 1989

OPNAV INSTRUCTION 2000.31

From: Chief of Naval Operations

Subj: MANDATORY USE OF MILITARY TELECOMMUNICATIONS STANDARDS IN THE MIL-STD-188 SERIES

Ref: (a) DoD Directive 4640.11 of 21 Dec 87 (NOTAL)
(b) DODINST 4120.3-M of Aug 78 (NOTAL)
(c) SECNAVINST 3000.2 (NOTAL)
(d) SECNAVINST 3000.3 (NOTAL)
(e) SECNAVINST 4120.3E (NOTAL)
(f) SECNAVINST 5711.10A (NOTAL)
(g) OPNAVINST 5711.95B (NOTAL)
(h) SECNAVINST 4210.7A (NOTAL)

Encl: (1) Definition of Terms

1. Purpose. To establish Chief of Naval Operations policy, procedures and responsibilities governing the mandatory application and use during the acquisition process of military telecommunications standards detailed in MIL-STD-188-100, (NOTAL), -200 (NOTAL), and -300 (NOTAL) series.

2. Definitions. Definitions of terms used in this instruction are included in enclosure (1).

3. Background.

a. Reference (a) directs that the provisions of the MIL-STD-188 series are mandatory for achieving interoperability and standardization of all Department of Defense (DOD) telecommunications equipment and systems. This directive emphasizes the importance of tailoring these standards to meet the requirements of all new or modified telecommunications equipment and systems during the acquisition process.

b. Reference (b), which details the policies, procedures and instructions for the Defense Standardization and Specification Program (DSSP), warns against misapplication of specifications and standards. Unawareness of essential information relative to design, technology, operational environments, management organization and techniques, or program cost and schedule goals, may result in costly over or under application of specifications and standards.

c. Standardization has been a prime Navy concern for many years as evidenced by Navy support of the treaty organizations, Joint Service Programs and policy or guidance issued in references

(c) through (g). Standardization within the Navy is a continuing requirement. However, past technical deficiencies in telecommunications systems and equipment and software used by the Navy have been traced to basic inadequacies in the application of telecommunication standards and to the lack of a well defined Navy program for their review, control and implementation.

d. During the development of specifications and support for new or modified telecommunication equipment and software, personnel need to emphasize commonality, compatibility, interchangeability, interoperability, and system/equipment/software interfaces. This can be accomplished, in part, by the application of the technical standards in MIL-STD-188 series. The mandatory use of these standards will aid significantly in achieving standardization and result in improvements in availability, maintainability, reliability, and supportability. This, in turn, will enhance life cycle configuration management and logistic support with subsequent reductions in life cycle costs.

4. Scope. All Navy activities involved in the development and/or acquisition of telecommunications equipment and/or software shall ensure compliance with the interoperability and performance standards in the following:

a. MIL-STD-188-100 series, containing standards common to long-haul and tactical communications.

b. MIL-STD-188-200 series, containing standards limited to tactical telecommunications.

c. MIL-STD-188-300 series, containing standards limited to long-haul telecommunications.

5. Policy. As specified in reference (a) development and acquisition of telecommunications equipment and software shall adhere to the standards defined in MIL-STD-188 series that are required for interoperability and compatibility of DOD telecommunications equipment and systems. The application and use of these standards are mandatory for all Navy telecommunications systems, equipment and software acquisitions. As directed in reference (h) and wherever possible, the use of Non-Development Items (NDI) systems/equipment to meet Navy requirements will be a principal means of satisfying the material needs of the Department of the Navy. NDI consideration during the acquisition process shall be the rule rather than the exception.

6. Procedures.

a. Navy activities and, in particular, the Naval Systems Commands (SYSCOMs) involved in management of telecommunication

acquisition programs shall review specification development and acquisition of telecommunication equipment and software to ensure compliance with reference (a) as implemented by this instruction and reference (h).

b. Close coordination is required among the affected Navy activities to ensure compatibility of telecommunication systems among ships, aircraft and ground facilities through review and control of intra-Navy and DOD standards and specifications developed and/or used by one or more of the activities.

c. All personnel involved in Navy contracting and program management personnel shall become thoroughly knowledgeable with this instruction and the application thereof in developing acquisition packages. The required telecommunication standards selected from the MIL-STD-188 series shall be included, as appropriate, in Navy acquisition documents. The responsible managers shall determine the relevance, tailoring requirements and precise application of these standards to the intended use of the equipment and software throughout their projected life-cycle.

d. Waivers and deviations from the MIL-STD-188 series standards can be requested from the Joint Steering Committee (JSC) constituted under the Defense Communications Agency (DCA). Nonconcurrence by JSC may be appealed by the initiating activity to the Departmental Standardization Office (DepSO) (NAVSEA 55Z3) for resolution.

7. Responsibilities and Actions.

a. CNO (OP-941) monitor compliance with reference (a) and this instruction and provide further guidance as required in the development and use of the MIL-STD-188 series.

b. The Space and Naval Warfare Systems Command (SPAWARSYSCOM) as the intra-Navy monitor for telecommunication systems standards shall monitor the control of systems standards and specifications for telecommunications systems. As such, SPAWAR shall:

(1) Direct and coordinate the development, promulgation and maintenance of telecommunications systems standards which are to be used by more than one concerned Navy activity (e.g. Commander, Naval Air Systems Command; Commander, Naval Sea Systems Command; Commander, Naval Telecommunications Command).

(2) Develop, define and with the concurrence of the other SYSCOMs and concerned Navy activities, interpret those intra-Navy and DOD standards and specifications which are considered applicable for telecommunications systems.

(3) Provide, within 90 days after the issuance of this instruction, the SYSCOMs and other concerned activities with review and reporting procedures covering the status of each telecommunication equipment and software acquisition to ensure conformance with reference (a) and this instruction.

(4) Develop and implement, a MIL-STD-188 series orientation program available to contracting and program management offices concerned with telecommunications acquisition.

(5) Provide Navy representation on committees and working groups involved in developing concise, clear instructions and tailored adaptations of MIL-STD-188 series standards for inclusion in acquisition packages with due regard for the provisions of reference (a) and this instruction.

(6) Convene and support Navy committees or working groups, as necessary, to effect coordination of intra-Navy and DOD telecommunications standards and specifications.

(7) Be advised by concerned Navy activity commanders why deviation from a standard or specification is necessary on an "as occurring basis."

(8) Maintain and issue a listing of applicable communications systems standards and specifications.

c. Each SYSCOM and operating activity involved in telecommunication equipment and software development and acquisition shall:

(1) Incorporate the requirements of reference (a) and this instruction within the framework of their MIL-STD program.

(2) Cite in the procurement specifications only those standards essential to the proper functioning of the device or system over its projected lifetime.

(3) Ensure the application of the MIL-STD-188 series in the organic acquisition specifications.

(4) Be responsible for policing and enforcing the use of the MIL-STD-188 series standards within their activity.

(5) Support the development, revision, and use of the MIL-STD-188 series documents and, when necessary, provide personnel and funding resources.

(6) Incorporate in each activity's internal review process a method for ensuring that the telecommunications standards are referenced in acquisition documents.

(7) Prepare requests for waivers and deviations to the standards, and forward to the JSC for consideration and approval. Provide information copies of waiver requests to SPAWARSYSCOM and the Navy DepSO.

(8) Designate a technically qualified telecommunication engineer and alternate to attend working groups and committees involved in standards development and interoperability.

D. Bruce Cargill
By direction

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DEFINITION OF TERMS

1. Definitions and terms applicable to this instruction with source documents identified following each definition:

a. AVAILABILITY. A measure of the degree to which a system, subsystem, or equipment is operable and in a committable state at the start of a mission, when the mission is called for at an unknown (random) point in time (FED-STD-1037A) (NOTAL).

b. COMMONALITY. A term applied to equipment or systems which have the quality of one entity possessing like and interchangeable parts with another equipment or system entity. Equipment and systems have commonality when each can be operated and maintained by personnel trained on others without additional specialized training; repair parts (components or subassemblies) are interchangeable; and consumable items are interchangeable between them (MIL-HDBK-188) (NOTAL).

c. COMPATIBILITY

(1) Systems for command and control, and communications are compatible with one another when necessary information can be exchanged at appropriate levels of command directly and in usable form. Communications equipments are compatible with one another if signals can be exchanged between them without the addition of buffering, translative, or similar devices for the specific purpose of achieving workable interface connections and if the equipments or systems being interconnected possess comparable performance characteristics, including suppression of undesired radiation.

(2) Capability of two or more items or components of equipment or material to exist or function without mutual interference (MIL-HDBK-188) (NOTAL).

d. DEPARTMENTAL STANDARDIZATION OFFICE (DepSO). The assignee and the participating department organizational unit identified for the management of assigned standardization activities (MIL-HDBK-188) (NOTAL).

e. DEVIATIONS AND WAIVERS

(1) Deviation is a specific written authorization, granted prior to the manufacture of an item, to depart from a particular performance or design requirement of a specification, drawing or other document, for a specific number of units or a specific period of time. A deviation differs from an engineering change in that an approved engineering change requires corresponding revision of the documentation defining the affected item,

whereas a deviation does not contemplate revision of the applicable specification or drawing.

(2) Waiver is a written authorization to accept an item; which during production or after having been submitted for inspection, is found to depart from specified requirements, but nevertheless is considered suitable for use "as is" or after rework by an approved method.

f. INTERCHANGEABILITY. A condition that exists when two or more items: (1) possess such functional and physical characteristics as to be equivalent in performance and durability, and (2) are capable of being exchanged one for the other without alteration of the items themselves or of adjoining items, except for adjustment, and without selection for fit and performance (FED-STD-1037A) (NOTAL).

g. INTERFACE. A concept involving the definition of the interconnection between two equipments or systems. The definition includes the type, quantity, and function of the interconnecting circuits and the type and form of signals to be interchanged via those circuits (FED-STD-1037A).

h. INTEROPERABILITY

(1) The ability of systems, units or forces to provide services to and accept services from other systems, units, or forces and to use the services so exchanged to enable them to operate effectively together.

(2) The condition achieved among communications-electronics systems or items of communications-electronics equipment when information or services can be exchanged directly and satisfactorily between them and/or their users. The degree of interoperability should be defined when referring to specific cases (FED-STD-1037A) (NOTAL).

i. MAINTAINABILITY. Maintainability is a characteristic of design and installation which is expressed as the probability that an item will be retained in, or restored to, a specific condition within a given period of time, considering all causes of failure, when the maintenance is performed following prescribed procedures and resources (FED-STD-1037A/MIL-STD-721C) (NOTAL).

j. MIL-STD-188 SERIES

(1) MIL-STD-188-100 series (DoD area Standards for Long-Haul Communications (SLHC)/Tactical Communications System

Technical Standards (TCTS)) (NOTAL). This series contains technical standards and design objectives which are common to both the long haul and tactical communications systems.

(2) MIL-STD-188-200 (DoD Standardization Area Assignment (TCTS). This series contains current tactical communications technical standards and design objectives including a revised version of standards and design objectives that are now contained in MIL-STD-188C. Moreover, this series will include appropriate unclassified design objectives and tactical communications systems technical standards currently published in JCS Publication 6-01.1. Appropriate communications-electronics systems standards and design objectives developed under joint projects, such as the JTC^3A program, will be integrated in the tactical communications standards.

(3) MIL-STD-188-300 Series (DoD Standardization Area Assignment (SLHC (NOTAL). This series contains communications system standards and design objectives applicable to the field of long haul and point-to-point communications in support of the Defense Communications System (DCS) and the National Military Command System (NMCS), and also to provide the necessary interface with non-DCS equipments. DCA is the lead service for this area (MIL-HDBK-188) (NOTAL).

k. RELIABILITY. Reliability is the probability that an item will perform its intended function for a specified interval under stated conditions (FED-STD-1037A) (NOTAL).

l. STANDARDIZATION. The adoption and use (by consensus or decision) of engineering criteria to achieve the objectives of the Defense Standardization and Specification Program (DSSP) (MIL-HDBK-188) (NOTAL).

m. STANDARD. A document that lists engineering and technical requirements for processes, procedures, practices and methods that have been chosen to be a standard. Standards may also establish requirements for selection, application and design criteria for material.

(1) "Military Standard" means a standard issued by the Department of Defense used solely or predominantly by military activities.

(2) "Federal Standard" means a standard issued by the General Services Administration (GSA) which is mandatory for use by all Federal agencies, including the Department of Defense (MIL-HDBK-188) (NOTAL).

n. SUPPORTABILITY. The degree to which system design characteristics and planned logistics resources, including manpower, meet system peacetime readiness and wartime utilization requirements (OPNAVINST 5000.49A) (NOTAL).

o. TELECOMMUNICATION. Any transmission, emission, or reception of signs, signals, writing, images, and sounds or information of any nature by wire, radio, visual, or other electromagnetic systems (FED-STD-1037A) (NOTAL).

p. TAILORING. The process by which the individual requirements (sections, paragraphs, or sentences) of the selected specifications and standards are evaluated to determine the extent to which each requirement is most suitable for a specific material acquisition and the modification of these requirements, as necessary, to assure that each tailored document invoked states only the minimum needs of the Government (Reference (b)).